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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,653	03/09/2004	Li-Yan Zhu	2855/111	4216

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EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,653

Applicant(s)

ZHU ET AL.

Examiner

William J. Klimowicz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-22 is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-15 and 23 is/are rejected.
- 7) ☒ Claim(s) 8-10 and 16-18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTC) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Status

Claims 1-23 are currently pending.

Specification

The disclosure is objected to because of the following informalities:

(i) With regard to line 2 of paragraph [0034], the designator “505a” should be changed to --505b--.

(ii) With regard to line 3 of paragraph [0034], the designator “505b” should be changed to --505a--.

(iii) With regard to line 7 of paragraph [0034], the designator “603b” should be changed to --603a--.

(iv) With regard to line 8 of paragraph [0034], the designator “603a” should be changed to --603b--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1-6 and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Lairson et al. (US 5,822,153).

As per claim 1, Lairson et al. (US 5,822,153) discloses a read head for a magnetic recording device, comprising: a substrate (27) made of an electrically insulating material (e.g., COL. 6, lines 21-22); a conductive film (44) disposed on said substrate (27); read-head circuitry (sensing current leads connected to MR (33; MR (33))) disposed over said conductive film (44).

As per claim 2, wherein said read-head is part of a slider device, the read head further comprising: an air bearing surface on said slider device (FIG. 2), wherein said conductive film (44) is exposed on said air bearing surface.

As per claim 3, wherein said conductive film (44) is disposed closer to a leading edge of said slider device than said read-head circuitry - see FIG. 1 and disk rotation arrow (41).

As per claim 4, wherein said read-head circuitry is giant magnetoresistive circuitry (e.g., see COL. 3, lines 65-66).

As per claim 5, wherein said substrate is made of alumina (e.g., COL. 6, lines 21-22).

As per claim 6, discloses a read head for a magnetic recording device comprising: the aforementioned substrate (27) made of an electrically insulating material; the conductive film (44) disposed on said substrate (27); a first insulating film (e.g., 67) disposed and planarized over said conductive film (44); an under-shield (60) disposed over said first insulating film (67) and a portion of said conductive film (44); a second insulating film (64) disposed over said under-shield; and read-head circuitry (sensing current leads connected to MR (33; MR (33))) disposed on said second insulating film (64) and over said conductive film (44).

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As per claims 11 and 14, Lairson et al. (US 5,822,153) discloses a method of fabricating a read head for a magnetic recording device, comprising: disposing a conductive patch material (44) on the substrate (27) made of an electrically insulating material; and disposing read-head circuitry (sensing current leads connected to MR (33; MR (33)) over a portion of said conductive patch material (44).

As per claims 12 and 14, wherein said read-head circuitry (sensing current leads connected to MR (33; MR (33)) is the aforementioned giant magnetoresistive circuitry, the method further comprising: disposing an under-shield (60) between said conductive patch material (44) and said read-head circuitry.

As per claim 13, wherein said substrate (27) is made of alumina (e.g., COL. 6, lines 21-22).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 15 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lairson et al. (US 5,822,153) in view of Barlow et al. (2001/0043446 A1).

See the description of Lairson et al. (US 5,822,153), *supra*.

As per claims 7, 15 and 23, Lairson et al. (US 5,822,153) does not expressly disclose wherein a grounding pad disposed on the second insulating film and conductively coupled to the corresponding conductive film (i.e., the shield member of the MR head).

Barlow et al. (2001/0043446 A1), however, discloses an analogous read head (301) wherein a grounding pad (324) is disposed on a second insulating film (see FIG. 4) and is conductively coupled to the corresponding conductive film (306, 308) (i.e., the shield member of the MR head), which corresponds directly to the conductive film/patch) of Lairson et al. (US 5,822,153).

Additionally, as per claim 23, Barlow et al. (2001/0043446 A1) discloses a head suspension assembly (316), wherein the suspension includes a conductive path (via 326) coupled to said grounding pad (324) (i.e., 326 is affixed in a manner to suspension 316 in order to allow suspension 316 to be free to move).

Given the express teachings and motivations, as espoused by Barlow et al. (2001/0043446 A1), it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a grounding pad disposed on the second insulating film and conductively coupled to the corresponding conductive film (i.e., the shield member of the MR head), of Lairson et al. (US 5,822,153), as expressly suggested by Barlow et al. (2001/0043446 A1).

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide a grounding pad disposed on the second insulating film and conductively coupled to the corresponding conductive film (i.e., the shield member of the MR head), of Lairson et al. (US 5,822,153), as expressly suggested by Barlow et al. (2001/0043446 A1) in order to provide the

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advantageous dissipation of heat from a shielded magnetoresistive sensor, as expressly suggested by Barlow et al. (2001/0043446 A1) (e.g., see paragraphs [0028-0031]).

Allowable Subject Matter

Claims 8-10 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 19-22 are currently allowed.

Conclusion

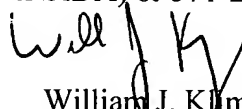
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


William J. Klimowicz
Primary Examiner
Art Unit 2627

WJK